

STATEMENT OF BASIS

as required by LAC 33:IX.3109, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0081809; AI 43545; PER20090002** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

I. THE APPLICANT IS:

Total Environmental Solutions, Inc
Plantation Trace
P.O. Box 14056
Baton Rouge, LA 70898

II. PREPARED BY:

Rachel Davis

DATE PREPARED:

June 5, 2009

III. PERMIT ACTION:

revocation and reissuance of LPDES permit LA0081809, AI 43545

LPDES application received: February 27, 2009

LPDES permit issued: June 1, 2006

LPDES permit expired: May 31, 2011*

*Although the permit does not expire until 2011, significant change in the flow from the facility is planned before the expiration of the permit. Rather than modify the permit only for it to be reissued soon after, the Department will revoke and reissue the current permit. This is in accordance with LAC 33:IX.3105.A and LAC 33:IX.2903 A.1.a.

IV. FACILITY INFORMATION:

A. The application is for the discharge of treated sanitary wastewater from a privately owned treatment works serving the Plantation Trace, Plantation Trace Addendum #4, Bayou Reserve Apartments and Sugar Plantation Subdivisions.

B. The permit application does not indicate the receipt of industrial wastewater.

C. The facility is located on Leighton Street in Thibodeaux, Lafourche Parish.

D. The treatment facility consists of a facultative lagoon and constructed wetlands with chlorine disinfection.

E. Outfall 001

Discharge Location: Latitude 29° 47' 74" North
Longitude 90° 51' 47" West

Description: treated sanitary wastewater

Expected Flow: 517 homes x 400 GPD = 206,800 GPD
340 Two-Bedroom Apartments x 300 GPD = 102,000 GPD
10 Acres of Commercial property x 1,500 GPD = 15,000 GPD
50 Sanctuary Seats x 3 GPD = 150 GPD
20 Daycare children x 15 GPD = 300 GPD

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Total Expected Flow: 0.3243 MGD

Type of Flow Measurement which the facility is currently using:
Continuous Recorder

V. RECEIVING WATERS:

The discharge is into an unnamed drainage ditch, thence into the Terrebonne-Lafourche Draining Canal in segment 120202 of the Terrebonne River Basin. This segment is not listed on the 303(d) List of impaired waterbodies.

The designated uses and degree of support for Segment 120202 of the Terrebonne River Basin are as indicated in the table below^{1/}:

Degree of Support of Each Use						
Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
Not Supported	Full	Full	N/A	N/A	N/A	N/A

^{1/}The designated uses and degree of support for Segment 120202 of the Terrebonne River Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2006 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 120202 of the Terrebonne River Basin is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated November 24, 2008 from Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

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Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Ms. Rachel Davis
 Water Permits Division
 Department of Environmental Quality
 Office of Environmental Services
 P. O. Box 4313
 Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:**Final Effluent Limits:**

Subsegment 120202, Bayou Black – Intracoastal Waterway to Houma, is not listed on LDEQ's Final 2006 303(d) list as impaired. However, subsegment 120202 was previously listed as impaired for Organic Enrichment/Low DO, Nitrate/Nitrite, and Phosphorus for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDL's and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDLs have been established for subsegment 120202:

Final Middle Terrebonne TMDL for DO & Nutrients

Per the TMDL, "Because no reductions were required, it is assumed that the point sources may discharge at their permitted concentration level and not make any deleterious effect on water quality." Therefore, the facility will be permitted according to current water quality regulations

OUTFALL 001

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Daily Max	Basis
BOD ₅	27	10 mg/l	15 mg/l	Limits are set in accordance with the Statewide Sanitary Effluent Limitations policy (SSELP) for facilities of this treatment type and the previous permit

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Effluent Characteristic	Monthly Avg (lbs./day)	Monthly Avg	Daily Max	Basis
TSS	41	15 mg/l	23 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.

*Concentration limits are used in accordance with LAC 33:IX.2709.F.1.b which states that mass limitations are not necessary when applicable standards and limitations are expressed in other units of measurement. LAC 33:IX.709.B references LAC 33:IX.711 which express BOD₅ and TSS in terms of concentration.

Other Effluent Limitations:**1) Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Daily Maximum) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.5905.C)

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X. PREVIOUS PERMITS:

LPDES Permit No. LA0081809: Issued: June 1, 2006
Expires: May 31, 2011

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Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Monthly Avg.	Daily Max	Measurement Frequency	Sample Type
Flow	Report	Report	Continuous	Recorder
BOD ₅	10 mg/l	15 mg/l	2/month	Grab
TSS	15 mg/l	23 mg/l	2/month	Grab
Fecal Coliform Colonies	200	400	2/month	Grab

XI. **ENFORCEMENT AND SURVEILLANCE ACTIONS:**A) **Inspections**

A review of the files indicates that there have been no recent inspections at the facility

B) **Compliance and/or Administrative Orders**

A review of the files indicates that there have been no recent compliance orders against the facility.

C) **DMR Review**

A review of the discharge monitoring reports for the period beginning **March 2007** through **March 2009** has revealed the following violations.

Period of Excursion	Parameter	Outfall	Permit Limit	Reported Quantity
February 2009	TSS	001	15 mg/l	16 mg/l
January 2009	TSS	001	15 mg/l	32 mg/l
	TSS		23 mg/l	36 mg/l
December 2008	TSS	001	15 mg/l	27 mg/l
	TSS		23 mg/l	29 mg/l
	BOD		10 mg/l	17.5 mg/l
	BOD		15 mg/l	25 mg/l
November 2008	TSS	001	15 mg/l	27 mg/l
	TSS		23 mg/l	35 mg/l
	BOD		10 mg/l	19.5 mg/l
	BOD		15 mg/l	28 mg/l
October 2008	TSS	001	15 mg/l	26.5 mg/l
	TSS		23 mg/l	30 mg/l
	BOD		10 mg/l	14.5 mg/l
	BOD		15 mg/l	16 mg/l
September 2008	TSS	001	15 mg/l	24.5 mg/l
	TSS		23 mg/l	28 mg/l
	BOD		10 mg/l	12 mg/l
August 2008	TSS	001	15 mg/l	16 mg/l
March 2008	TSS	001	15 mg/l	35 mg/l
	TSS		23 mg/l	37 mg/l
	BOD		10 mg/l	21 mg/l
	BOD		15 mg/l	27 mg/l
February 2008	TSS	001	15 mg/l	46.5 mg/l
	TSS		23 mg/l	47 mg/l
	BOD		10 mg/l	16.5 mg/l
	BOD		15 mg/l	18 mg/l
January 2008	TSS	001	15 mg/l	25 mg/l
	TSS		23 mg/l	26 mg/l
March 2007	TSS	001	15 mg/l	25.5 mg/l
	TSS		23 mg/l	28 mg/l

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XII. ADDITIONAL INFORMATION:

The Louisiana Department of Environmental Quality (LDEQ) reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as requested by the permittee and/or as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

This permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(C) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act or more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDL's, if the effluent standard, limitations, water quality studies or TMDL's so issued or approved

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit; or
3. Require reassessment due to change in 303(d) status of waterbody; or
4. Incorporates the results of any total maximum daily load allocation, which may be approved or the receiving water body.

Please be aware that the Department has the authority to reduce monitoring frequencies when a permittee demonstrates two or more consecutive years of permit compliance. Monitoring frequencies established in LPDES permits are based on a number of factors, including but not limited to, the size of the discharge, the type of wastewater being discharged, the specific operations at the facility, past compliance history, similar facilities and best professional judgment of the reviewer. We encourage and invite each permittee to institute positive measures to ensure continued compliance with the LPDES permit, thereby qualifying for reduced monitoring frequencies upon permit reissuance. If the Department can be of any assistance in this area, please do not hesitate to contact us. As a reminder, the Department will also consider an increase in monitoring frequency upon permit reissuance when the permittee demonstrates continued non-compliance.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 0.3243 MGD.

Effluent loadings are calculated using the following example:

$$\text{BOD: } 8.34 \text{ lb/gal} \times 0.3243 \text{ MGD} \times 10 \text{ mg/l} = 27 \text{ lb/day}$$

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** shall remain as previously permitted:

Effluent CharacteristicsMonitoring Requirements

	<u>Measurement</u>	<u>Sample</u>
	<u>Frequency</u>	<u>Type</u>
Flow	Continuous	Recorder
BOD ₅	2/month	Grab
Total Suspended Solids	2/month	Grab
Fecal Coliform Bacteria	2/month	Grab
pH	2/month	Grab

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XIII. TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to revoke and reissue a permit for the discharge described in this Statement of Basis.

XIV. REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Total Environmental Solutions, Inc, Plantation Trace, February 27, 2009